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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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MARSH FISCHMANN & BREYFOGLE LLP
8055 E. Tufts Avenue, Suite 450
Denver, CO 80237

EXAMINER
CALLAHAN, PAUL E

ART UNIT	PAPER NUMBER
2437	

NOTIFICATION DATE	DELIVERY MODE
01/27/2012	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOMail@mfblaw.com

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>20 October 2011</u>.

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5) ☒ Claim(s) <u>1-8,13-20,22-24,26-32,34 and 35</u> is/are pending in the application.

  5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☒ Claim(s) <u>1-8,13-20,22-24,26-32,34 and 35</u> is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a) ☐ All b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   In view of the Appeal Brief filed on 10-20-2011, PROSECUTION IS HEREBY

REOPENED. New grounds of rejection are set forth below.

        To avoid abandonment of the application, appellant must exercise one of the

following two options:

        (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply

under 37 CFR 1.113 (if this Office action is final); or,

        (2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed

by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and

appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth

in 37 CFR 41.20 have been increased since they were previously paid, then appellant

must pay the difference between the increased fees and the amount previously paid.

        A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by

signing below:

2.   Claims 1-8, 13-20, 22-24, 26-32 34 and 35 are pending and have been

examined.

        The Applicant is reminded that a complete listing of the claims must be provided

in any response as per 37 C.F.R. 1.121 5[c]. The Appellant's brief filed 10-20-2011

neglects to list the cancelled claims.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

4.   Claims 28-31 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

As for claim 28, the preamble of claim 28 indicates that it is directed towards a

system or apparatus. However, the limitations in the claim are directed to method steps

carried out by the system or apparatus, with no positive recitation of any hardware

element that carries out the method steps. Therefore claim 28 is directed towards more

than one statutory class of invention and therefore is indefinite since a claim must be

directed towards only one class. See MPEP Sec. 2173.05(p) II and Sec. 2173.05(q).

Claims 29-31 are dependent on claim 28 and do not cure its deficiency.

Therefore they are rejected on the same basis as claim 28.

5.   Claims 3, 4, 7, 8, 15, 16, 18, 19, 22, 23, 26, 27, 30, 31, 34, and 35 are rejected

under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly

point out and distinctly claim the subject matter which applicant regards as the

invention.

Each of these claims use the trade name Java to recite limitations directed

towards the use of a Java secure channel or a Java stream. From MPEP Sec.

2173.05(u): " If the trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of the 35 U.S.C. 112, second paragraph. Ex parte Simpson, 218 USPQ 1020 (Bd. App. 1982).

Claim Rejections - 35 USC § 101

6.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7.   Claims 5-8, 13-16, 24, 26, 27-32, 34, and 35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As for claims 5-8, 24, 26 and 27, the preambles of independent claims 5 and 24 indicate that they are directed towards a computer-program product. However, the claims do not positively recite any limitation that specifies the software as being embodied in a non-transitory computer-readable medium. Therefore the claims set forth only functional descriptive language and are non-statutory since this does not fall into one of the classes of invention eligible for the grant of a US patent. Unless embodied in a non-transitory computer-readable medium the software in and of itself cannot be considered as a computer component, and hence cannot effect a change of state of a processor to produce a useful or tangible result

Claims 5-8, 26 and 27 are dependent on claims 5 and 24 and do not cure the deficiencies of the independent claims. Therefore they are rejected on the same basis as claims 5 and 27.

As for claims 13-16, 32, 34 and 35, the preamble of independent claims 13 and 32 indicate that they are directed towards an electromagnetic data signal. The claims are directed towards non-statutory subject matter since this does not fall into one of the classes of invention eligible for the grant of a US Patent *In re Nuijten*, 500 F.3d 1346, 84 USPQ2d 1495, 2007.

Claims 14-16, 34 and 35 are dependent on claims 13 and 32 and do not cure the deficiencies of the independent claims. Therefore they are rejected on the same basis as claims 13 and 32.

As for claims 28-31, the preamble of claim 28 indicates that it is directed towards a system or apparatus, however all of the limitations in the claim are directed to method steps carried out by the system of apparatus, with no positive recitation of any hardware element that carries out the steps. Therefore claim 28 is directed towards more than one statutory class of invention and therefore is non-statutory since a claim must be directed towards only one class. See MPEP Sec. 2173.05(p) II and Sec. 2173.05(q).

Claims 29-31 are dependent on claim 28 and do not cure its deficiency. Therefore they are rejected on the same basis as claim 28.

Claim Rejections - 35 USC § 102

8.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the
United States before the invention thereof by the applicant for patent, or on an international application
by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this
title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior

to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9.   Claims 1, 5, 13, 17, 20, 24, 28, and 32 are rejected under 35 U.S.C. 102(e) as

being anticipated by Spies et al., US 5,689,565. Spies teaches:

As for claim 1, method for providing communication protocol layer independent

security for data transmitted between a first process, executing on a first network node,

and a second process, executing on a second network node (col. 3 lines 5-33, col. 5

lines 31-45), wherein the first network node and the second network node each support

at least one common communication protocol layer (col. 8 lines 15-27: participants all

have a common communication application to transfer packets, fig.10, col.29, lines 35-

45, data encrypted/signed and send over communication path transported by any

communication protocol), the method comprising the steps of: establishing a

communication channel between the first network node and the second network node

(fig.6-8, col.20, 1-40, preparing message for transmission, processing message at

recipient, col. 29,1-10); establishing a first stream between the first process and the

communication channel (fig.6-8, col.20, 1-40, preparing message for transmission,

processing message at recipient, col. 29,1-10); establishing a second stream between

the second process and the communication channel (fig.6-8, col.20, 1-40, preparing

message for transmission, processing message at recipient, col. 29,1-10); in response

to the data being written to the first stream, encrypting the data to generate encrypted

data , the encrypting of the data being performed independent of any communication

protocol layers used to transport the encrypted data from the first network node to the

second network node (col.29, lines 35-45, data encrypted/signed and send over

communication path transported by any communication protocol); causing the

encrypted data to be transmitted from the first network node to the second network

node according to the at least one communication protocol layer supported by the first

and second network nodes (col. 8 lines 15-27: participants all have a common

communication application to transfer packets, fig.10, col.29, lines 35-45, data

encrypted/signed and send over communication path transported by any

communication protocol) ; and in response to the encrypted data being read from the

second stream, decrypting the encrypted data to recover decrypted data which is

identical to the data on the first network node before the data was written to the first

stream (fig. 7,8, col. 13 lines 5-51, col. 20 lines 1-40), the decrypting of the encrypted

data being performed independent of any communication protocol layers used to transport the encrypted data from the first network node to the second network node (fig.10, col.29, lines 35-45, data encrypted/signed and send over communication path transported by any communication protocol).

As for claim 5, this claim is directed towards the computer program-product that directs a processor to carry out the method of claim 1. Claim 5 recites substantially the same limitations as claim 1 and is rejected on the same basis as that claim.

As for claim 13, this claim is directed towards the computer data signal embodies in a carrier wave that directs a processor to carry out the method of claim 1. Claim 13 recites substantially the same limitations as claim 1 and is rejected on the same basis as that claim.

As for claim 17, a method for providing communication protocol layer independent security for data transmitted by a process executing on a network node (col. 3 lines 5-33, col. 5 lines 31-45), the method comprising the steps of: a) establishing a stream between the process and a communication channel (fig.6-8, col.20, 1-40, preparing message for transmission, processing message at recipient, col. 29,1-10); and b) in response to the data being written to the stream, encrypting the data to generate encrypted data (col.29, lines 35-45, data encrypted/signed and send over communication path transported by any communication protocol); the encrypting of the

data being performed independent of any communication protocol layers used to transport the encrypted data on the communication channel (col.29, lines 35-45, data encrypted/signed and send over communication path transported by any communication protocol).

As for claim 20, a method for providing communication protocol-independent security for data transmitted between a first node and a second node (col. 3 lines 5-33, col. 5 lines 31-45), the method comprising the steps of: establishing a communication channel between a first network node and a second network node (fig.6-8, col.20, 1-40, preparing message for transmission, processing message at recipient, col. 29,1-10); establishing a first stream from a first process to the communication channel after the establishment of the communication channel, wherein the first stream is encrypted after the first process and before entering the communication channel (fig.4, 5, 6-8, col. 10 lines 10-15, encrypted data is placed into a packet for transmission, col.20, 1-40, preparing message for transmission, processing message at recipient, col. 29,1-10) and the encrypted first stream is independent of any communication protocol layers (col.29, lines 35-45, data encrypted/signed and send over communication path transported by any communication protocol); and establishing a second stream from the communication channel to a second process after the establishment of the communication channel, wherein the second stream is decrypted after the communication channel and before entering the second process. (fig.4, 5, 6-8, col. 10 lines 10-15, encrypted data is placed into a packet for transmission, col.20, 1-40,

preparing message for transmission, processing message at recipient (col. 29,1-10) and

the encrypted first stream is independent of any communication protocol layers (col.29,

lines 35-45, data encrypted/signed and send over communication path transported by

any communication protocol).

As for claim 24, this claim is directed towards the computer program product that

directs a processor to carry out the method of claim 20. Claim 24 recites substantially

the same limitations as claim 20 and is rejected on the same basis as that claim.

As for claim 28, this claim is directed towards the computer network or system

used to carry out the method of claim 20. Claim 28 recites substantially the same

limitations as claim 20 and is rejected on the same basis as that claim.

As for claim 32, this claim is directed towards the computer data signal embodies

in a carrier wave that directs a processor to carry out the method of claim 20. Claim 32

recites substantially the same limitations as claim 20 and is rejected on the same basis

as that clam.

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
      obviousness or nonobviousness.

11.   Claims 2, 6, 14, and 29 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Spies, and Elgamal et al., US 5,825,890.

As for claim 2, Spies teaches the method of Claim 1, but not further including the

steps of performing a communication protocol layer specific encryption of data to be

sent across the communication channel at the first network node, and performing a

communication protocol layer specific decryption of data received from the

communication channel at the second network node. However Elgamal does teach

these features (fig. 12a,b,c, col. 5 lines 15-39, col. 15 line 60 trough col. 16 line 25: the

encryption/decryption scheme to be used is determined during the SSL setup phase

and is dependent on the SSL library). Therefore it would have been obvious to one of

ordinary skill in the art at the time the invention was made to incorporate this into the

system of Spies. It would have been obvious to do so since this would allow for

increased security in the system of Spies by the use of industry standard secure

communication protocols.

As for claim 6, this claim is directed towards the computer program-product that directs a processor to carry out the method of claim 2. Claim 6 recites substantially the same limitations as claim 2 and is rejected on the same basis as that claim.

As for claim 14, this claim is directed towards the computer data signal embodied in a carrier wave that directs a processor to carry out the method of claim 2. Claim 14 recites substantially the same limitations as claim 2 and is rejected on the same basis as that claim.

As for claim 29, Spies teaches the communication network of claim 28, but not further wherein the encryption of the first stream and the decryption of the second stream is specific to a communication protocol layer. However Elgamal does teach these features (fig. 12a,b,c, col. 5 lines 15-39, col. 15 line 60 trough col. 16 line 25: the encryption/decryption scheme to be used is determined during the SSL setup phase and is dependent on the SSL library). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate this into the system of Spies. It would have been obvious to do so since this would allow for increased security in the system of Spies by the use of industry standard secure communication protocols.

Allowable Subject Matter

12.   Claims 3 and 4 are not rejected over prior art, but only under 35 USC Sec. 112

2nd paragraph. These claims would be allowable if amended to overcome the 112 2nd

paragraph rejections, and then rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

Conclusion

13.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

        The following US Patent discloses methods for secure data transmission wherein

encryption is independent of a communication protocol that is pertinent to the

Applicant's Disclosure:

        Hardy et al.,   US 5,179,591

14.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Paul E. Callahan whose telephone number is (571) 272-

3869. The examiner can normally be reached on M-F from 9 to 5.

        If attempts to reach the examiner by telephone are unsuccessful, the Examiner's

supervisor, Eleni Shiferaw, can be reached on (571) 272-3867. The fax phone number

for the organization where this application or proceeding is assigned is: (571) 273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/PEC/
AU2437
/Eleni A Shiferaw/
Supervisory Patent Examiner, Art Unit 2437